HIRNLE, Zbigniew; CZYZEWSKA, Felicja; HAAS, Wiktor

Two cases of panarteritis nodosa generalisata. Polski tygod.
lek. 12 no.3:94-99 14 Jan 57.

1. (Z Zakladu Anatomii Patologicznej; kierownik prof. dr.
Z. Albert, z I Kliniki Chorob Wewnetrznych; kierownik prof.
dr. Z. Czezowska i z I Kliniki Chorob Dzieciecych Akademii
Medycznej we Wroclawiu; kierownik prof. dr. H. Hirszfeldowa).
Adres: Wroclaw, Zakl. Anat.-Pat. Ak. Med., ul. Chalubienskiego 5.
        (PERIARTERITIS NODOSA, pathol.
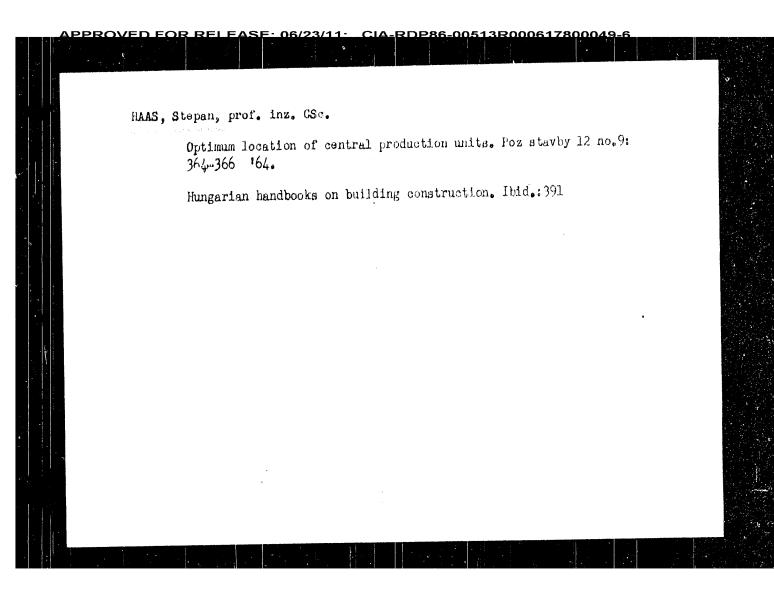   postmortem. (Pol))

2444. HAAS W., MAKOWER H., SKURSKA Z., SYGNATOWICZ J. and ZOPOTH J.
T. Klin. Ped. A. M., Wrocław; Odd. Wirusologii Inst. Immunologii i Terapii
Doswiadczalnej. *Paracolobactrum w biegunkach neimowlęcych. *Para-
colon bacillus in infantile diarrhoeas* PEDIAT. POL. 31/1
(35-44) Graphs 2 1956.

In 180 cases of diarrhoea paracolon bacillus was found in the faeces and serological
examinations showed specific agglutination reactions. Diarrhoeas caused by this
microorganism do not present any special characteristic picture of the disease but
the course of the disease is, on the whole, severe with recurrent exacerbations. The
infection gives specific agglutination reactions. In a number of cases it was possible
to find in the serum an increasing titre of the antibodies against the cultured strains.
The germ is sensitive to chloramphenicol and chlortetracycline but does not react
to sulphaguanidine and bacteriophage treatment.
(XX, 7, 4)

HAAS, WIKTOR

HIRSZFELDOWA, Hanna; SKURSKA, Zofia; ZOPOTH, Janina; SYGNATOWICZ, Janina;
HAAS, Wiktor; BABCZYSZYN, Jadwiga; MAKOWER, Henryk

Studies on aerobic flora in the intestines in diarrhea in
children with special reference to Paracolobactrum. Med. dosw.
mikrob. 8 no.4:405-426 1956.

1. Z I Kliniki Dzieciecej A.M., z Dzialu Wirusologii Inst. Immun.
i Ter. Dosw. P.A.N. orag z Oddzialu biegunkowego Szpitala im.
Korczaka we Wroclawiu.
    (DIARRHEA, in infant and child,
        fecal Paracolobactrum (Pol))
    (FECES, microbiology,
        Paracolobactrum in diarrhea in child. (Pol))
    (PARACOLOBACTRUM,
        fecal in diarrhea in child (Pol))

HAAS, Wiktor; JAWORSKA, Halina.

Case of reticulosis with atypical hematological picture.
Pediat.polska 30 no.10:963-966 Oct. '55.

1. Z I Kliniki Chorob Dzieciecych A M we Wroclawiu. Kierownik
prof. dr. med. H. Hirzieldowa. Wroclaw, Lokietka 3 m. 6.
     (LIPOIDOSIS,
          Gaucher's dis. in 8-month-old inf., atypical hetamol.
          picture)

KUBICZ, Stanislaw; HAAS, Wiktor.

Case of syndrome of idiopathic pulmonary hemosiderosis. Postepy radiol. Vol.1:117-124 1954.

1. Z Kliniki Radiologicznej Kierownik: prof.dr med. Witold Grabowski, z I Kliniki Pediatrycznej A.M. we Wroclawiu. Kierownik: prof. dr med. Hanna Hirszfeldowa.
       (LUNGS, diseases,
           hemosiderosis, case report)
       (HEMOCHROMATOSIS,
           lungs, case report)

HAAS, Tivadar, okleveles gepeszmernok; MULLER, Laszlo, okleveles
villamosmernok

Calculation of faults of direct-current electric railroads.
Elektrotechnika 53 no.4:151-16° '60.

1. Ut- Vasuttervezo Vallalat.

HAAS, Stepan, prof. inz. CSc.

Optimum location of central production units. Poz stavby 12 no.9:
364-366 '64.

Hungarian handbooks on building construction. Ibid.:391

HAAS, Stepan, prof,, inz., CSc.; STRADAL, Oldrich, doc., inz.; TOMSIK,
    Cenek; HAJEK, Vladimir, inz., CSc.

    Planning and control of the building industry. Poz stavby
    11 no.11:573-584 '63.

    1. Ceske vysoke uceni technicke, stavebni fakulta (for all
    except Tomsik). 2. Reditel narodniho podniku Pozemni stavby
    Plzen (for Tomsik).

Haas, S.

Haas, S. Multistory assembled industrial buildings in Hungary. p.40.
Conveying a mortar and concrete mixture by compressed air.
Tr. from the German. p. 44.

Vol. 5, no. 1, Jan. 1957
POZEMNI STAVBY
TECHNOLOGY
Czechoslovakia

So. East European Accessions, Vol. 6, No. 5, May 1957

HAAS, S. - Inzenyrske Stavby - Vol. 3, no. 4, Apr. 1955.
Proceedings and resolution of the National Conference of Activists in
Construction Engineering held March 7-8, 1955. p. 133.

Results of the competition for a water tank having a volume of 1,000 cu. m made
of prefabricated parts. p. 161.

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 4, No. 9, Sept. 1955.
Uncl.

Haas, S.

Cooperation between research and production. p. 339. INZENYRSKE
STAVBY. (Ministerstvo stavebnictvi) Praha. Vol. 4, no. 15,
Aug. 1954.

Source: EEAL   LC   Vol. 5, No. 10   Oct. 1956

HAAS, Regina; WIERZBIŃSKA, Anna

    Chronic lymphatic leukemia and multiple myeloma. Polsk. _ _ _ _ _
    wewnet. 34 no.5:627-629 '64

    1. Z III Kliniki Chorob Wewnetrznych Akademii Medycznej w Lo-
    (Kierownik: prof. dr. med. K. Burke ___) z Zakladu ___ _ _ gii
    lekarskiej przy III Katedrze Chorob Wewnetrzny _ Akademii Me-
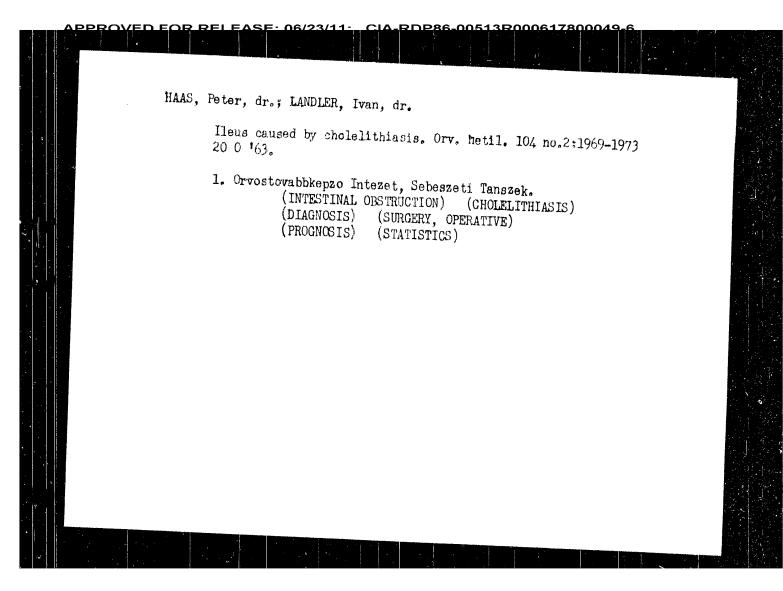   dycznej w Lodzi (Kierownik: doc. dr. med. A. _ _ _ _ _ ska).

HUNGARY

HAAS, Peter, Andras, Dr; Institute for Advanced Medical Education, Department of Surgery (Orvostovabbkepzo Intezet, Sebeszeti Tanszek).

"Acute Ulcer Perforation, an Early Complication of Gastric Surgery for Ulcer."

Abstract: [Author's Hungarian summary] The author calls attention to the acute perforation of ulcer, which is not a rare complication of gastric resection. Short histories of four such cases are presented. The etiology of acute ulcers is unclear. It is possible that acute ulcers represent a peculiar reaction of the organism to various traumas but they can also be looked upon as recidives of the ulcerative disease. Based on experience, the author attributes considerable significance to predisposition in the development of ulcers. The symptoms of the complication are described briefly. In the author's experience, immediate surgery after this complication is suspected can make healing possible. 10 Western, 3 Hungarian references.

1/1

HAAS, Peter, dr.; LANDLER, Ivan, dr.

Ileus caused by cholelithiasis. Orv. hetil. 104 no.2:1969-1973
20 O '63.

1. Orvostovabbkepzo Intezet, Sebeszeti Tanszek.
        (INTESTINAL OBSTRUCTION)   (CHOLELITHIASIS)
        (DIAGNOSIS)   (SURGERY, OPERATIVE)
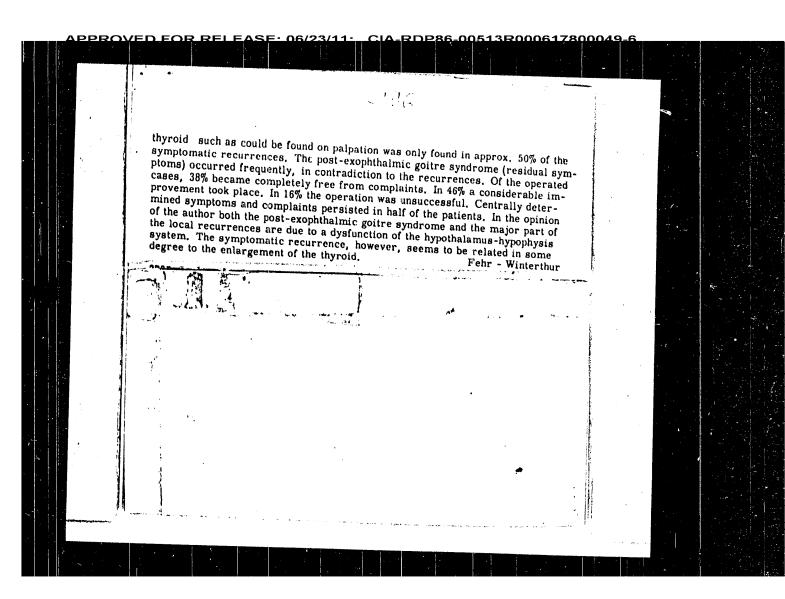   (PROGNOSIS)   (STATISTICS)

HUNGARY

BARNA, Laszlo, Dr, HAAS, Peter, Dr; Institute for Advanced Medical Studies,
Departments of Rontgenology and Surgery (Orvostovabbkepzo Intezet Rontgen-
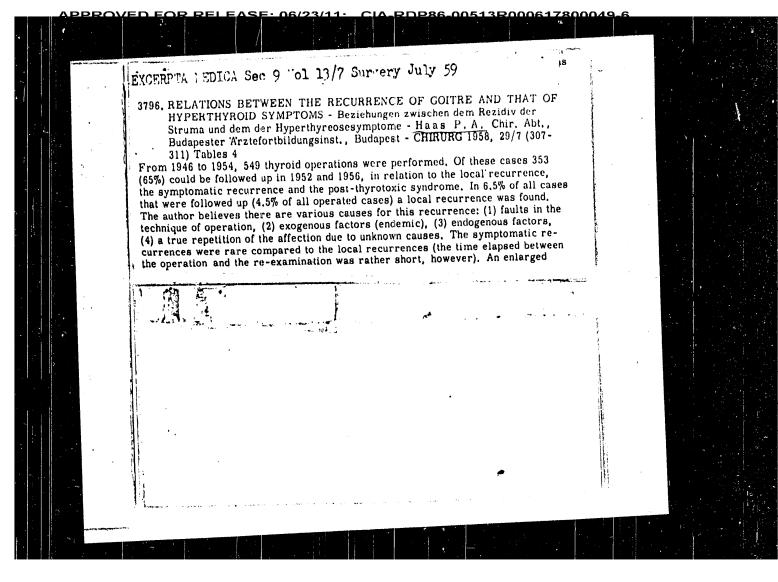es Sebeszeti Tanszeke).

"Gallstones in the Stomach."

Abstract: [Authors' English summary modified] On the basis of two cases,
the pathological changes and the clinical and radiological symptoms of gall-
stones which entered the stomach are discussed. Since this is not a very
infrequent clinical picture, X-ray examinations of the stomach with a little
thin contrast medium are recommended by the authors as soon as possible in
cases of abdominal symptoms accompanied by severe pain if peritonitis can
be excluded. 18 Western, 8 Hungarian references.

1/1

thyroid such as could be found on palpation was only found in approx. 50% of the symptomatic recurrences. The post-exophthalmic goitre syndrome (residual symptoms) occurred frequently, in contradiction to the recurrences. Of the operated cases, 38% became completely free from complaints. In 46% a considerable improvement took place. In 16% the operation was unsuccessful. Centrally determined symptoms and complaints persisted in half of the patients. In the opinion of the author both the post-exophthalmic goitre syndrome and the major part of the local recurrences are due to a dysfunction of the hypothalamus-hypophysis system. The symptomatic recurrence, however, seems to be related in some degree to the enlargement of the thyroid.

Fehr - Winterthur

3796. RELATIONS BETWEEN THE RECURRENCE OF GOITRE AND THAT OF
HYPERTHYROID SYMPTOMS - Beziehungen zwischen dem Rezidiv der
Struma und dem der Hyperthyreosesymptome - Haas P. A. Chir. Abt.,
Budapester Ärztefortbildungsinst., Budapest - CHIRURG 1958, 29/7 (307-
311) Tables 4

From 1946 to 1954, 549 thyroid operations were performed. Of these cases 353
(65%) could be followed up in 1952 and 1956, in relation to the local recurrence,
the symptomatic recurrence and the post-thyrotoxic syndrome. In 6.5% of all cases
that were followed up (4.5% of all operated cases) a local recurrence was found.
The author believes there are various causes for this recurrence: (1) faults in the
technique of operation, (2) exogenous factors (endemic), (3) endogenous factors,
(4) a true repetition of the affection due to unknown causes. The symptomatic re-
currences were rare compared to the local recurrences (the time elapsed between
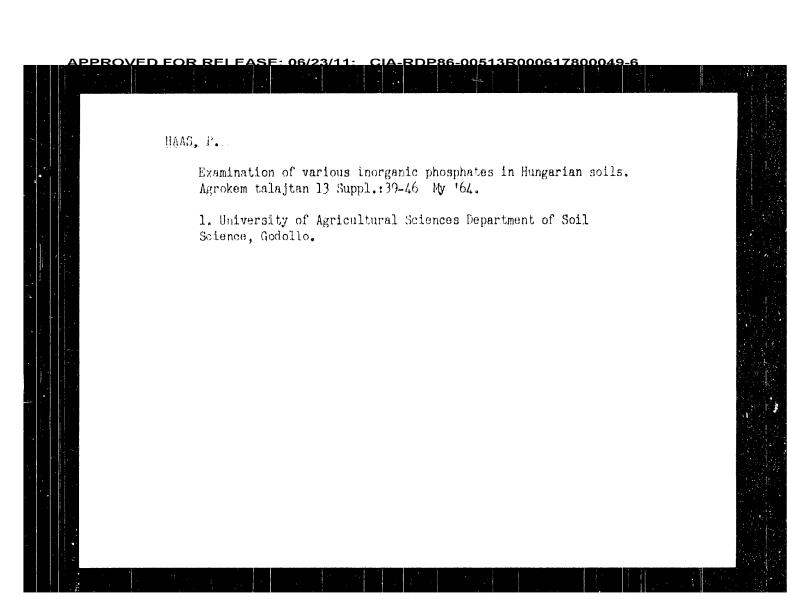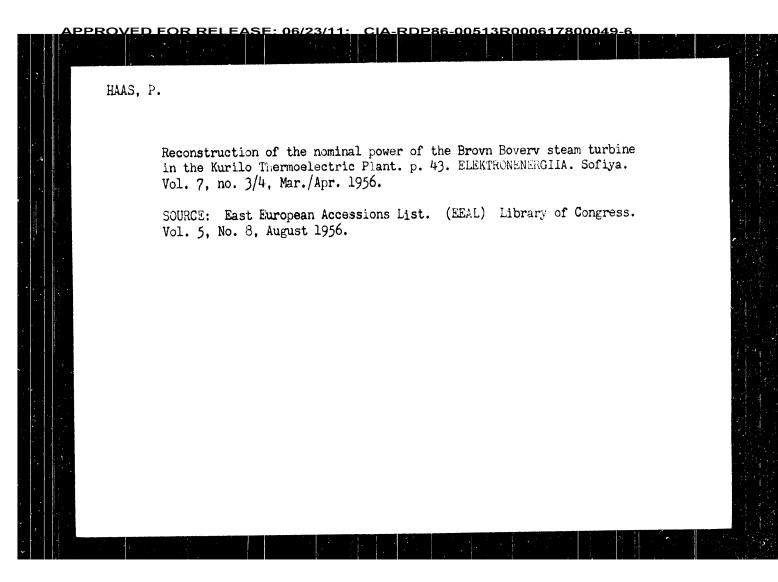the operation and the re-examination was rather short, however). An enlarged

HAAS, Peter, dr.

Importance of the central and peripheral symptoms in connection
with indications for struma surgery. Orv. hetil. 95 no.30:815-818
25 July 54.

1. A Szabolcs-utcai Allami Korhaz (igazgato: Doleschall Frigyes dr.)
Sebeszeti Osztalyanak (foorvos: Molnar Bela dr.) kozlemenye
        (GOITER, surgery
            indic. & postop. compl.)

HAAS, Peter; ZAHUMENSZKY, Elemer

Cancer of the stomach following gastrectomy and gastroentero-
anastomosis for peptic ulcer. Orv hetil 95 no.15:416-420 Ap '54.
                                                    (KEAL 3:8)

1. A Szabolcs-utcai Allami Korhaz (igazgato:Doleschall Frigyes dr.)
Sebeszeti Osztalyanak (foorvos: Molnar Bela dr., az crvostudomanyok
kandidatusa) kozlemenye.
        (STOMACH, neoplasms
          *after gastrectomy & gastroenteroanastomosis for peptic
          ulcer)
        (PEPTIC ULCER, surg.
          *gastrectomy & gastroenteroanastomosis, compl., cancer)

HAAS, P.

Examination of various inorganic phosphates in Hungarian soils.
Agrokem talajtan 13 Suppl.:39-46 My '64.

1. University of Agricultural Sciences Department of Soil
Science, Godollo.

HAAS, P.

Reconstruction of the nominal power of the Brovn Boverv steam turbine
in the Kurilo Thermoelectric Plant. p. 43. ELEKTRONENERGIIA. Sofiya.
Vol. 7, no. 3/4, Mar./Apr. 1956.

SOURCE: East European Accessions List. (EEAL) Library of Congress.
Vol. 5, No. 8, August 1956.

HAAS, N.

Path of Soviet anthropology. p. 31. PROBLEME DE ANTROPOLOGIE. (Academia Republicii Populare Romine) Bucuresti. Vol. 1, 1954.

SOURCE: East European Accessions List, (EEAL), Library of Congress, Vol. 4, no. 12, December 1955

HAAS, I.

Some problems of foreign trade with chemical commodities especially of the inorganic
type.

p. 4. (Chemicky Prumysl. Vol. 7, no. 10, Oct. 1957, Praha, Czechoslovakia)

Monthly Index of East European Accessions (EEAI) LC. Vol. 7, no. 2,
February 1958

HAAS, L.; WUNSCHOVA, B.; CHODUROVA, A.

Psychosocial concept of suicide and delinquency. Cesk. psych.
60 no.6:375-382 N '64.

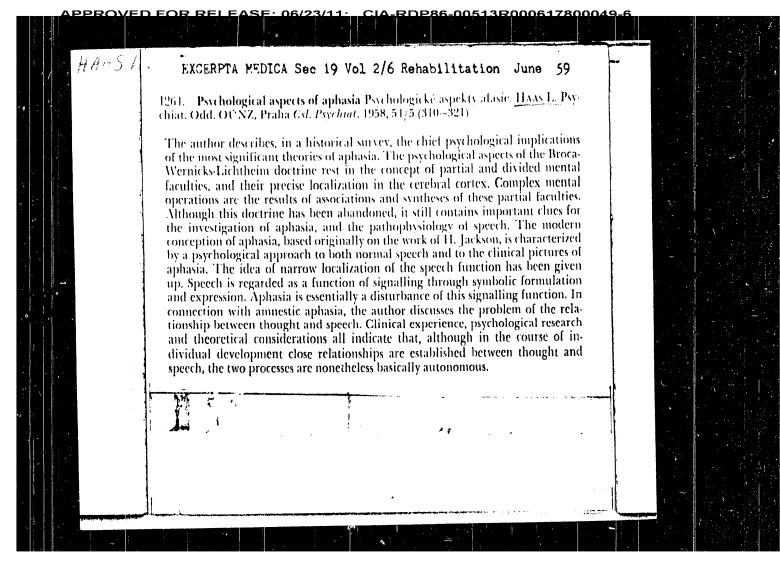1. Psychiatricke oddeleni Ustav narodniho zdravi ONV v Brne
5 a 6.

CZECHOSLOVAKIA

HAAS, L., Psychiatric Department (Psychiatricke oddeleni), OUNZ [Okresni ustav narodniho zdravi; Okres Institute of Public Health], Prague 5.

" Report on a Study Tour To Great Britain"

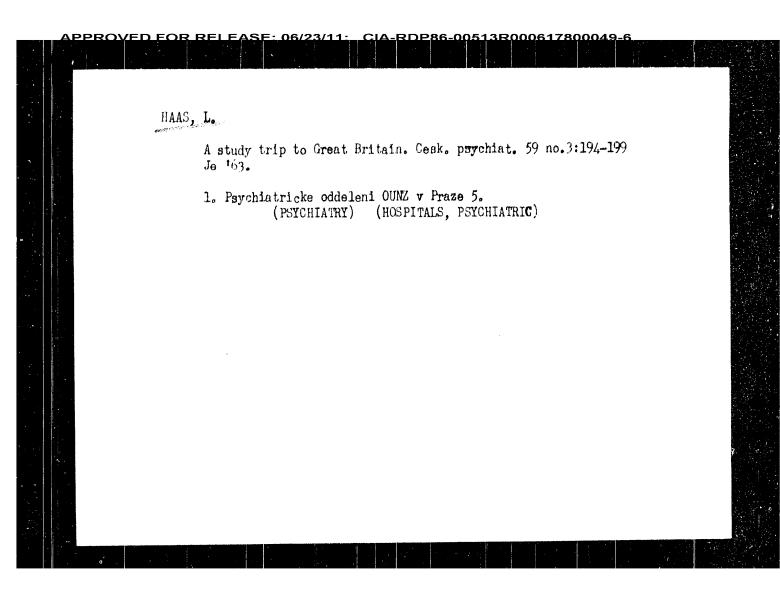Prague, Ceskoslovenska Psychiatrie, Vol LIX, No 3, July 63, pp 194-199.

Abstract: Purpose of the trip wa to study the new method of "open-door" mental hospitals, "unified hospitals," changes in the National Health Service, and psychotherapy within the framework of the National Health Service.
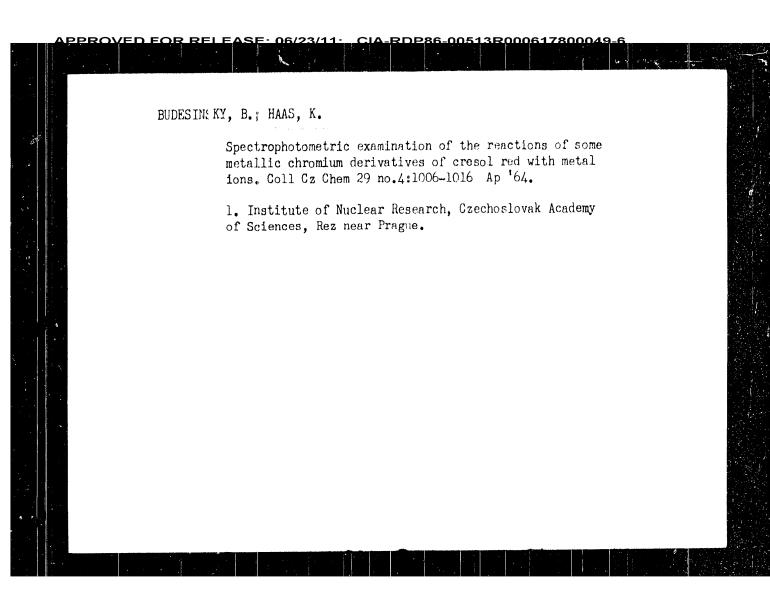
1/1

HAAS, Ladislav

Active factors in psychotherapy. Cesk.psychiat.56 no.4:257-262
Ag'60.

1. Psychiatricke oddeleni polikliniky v Praze 16.
          (PSYCHOTHERAPY)

H A A S /

1261. Psychological aspects of aphasia Psychologické aspekty afasie. HAAS L. Psy-chiat. Odd. OÚNZ, Praha Csl. Psychiat. 1958, 54/5 (310--321)

The author describes, in a historical survey, the chief psychological implications of the most significant theories of aphasia. The psychological aspects of the Broca-Wernicks-Lichtheim doctrine rest in the concept of partial and divided mental faculties, and their precise localization in the cerebral cortex. Complex mental operations are the results of associations and syntheses of these partial faculties. Although this doctrine has been abandoned, it still contains important clues for the investigation of aphasia, and the pathophysiology of speech. The modern conception of aphasia, based originally on the work of H. Jackson, is characterized by a psychological approach to both normal speech and to the clinical pictures of aphasia. The idea of narrow localization of the speech function has been given up. Speech is regarded as a function of signalling through symbolic formulation and expression. Aphasia is essentially a disturbance of this signalling function. In connection with amnestic aphasia, the author discusses the problem of the rela-tionship between thought and speech. Clinical experience, psychological research and theoretical considerations all indicate that, although in the course of in-dividual development close relationships are established between thought and speech, the two processes are nonetheless basically autonomous.

MAS, Ladislav

rigidity & premenstrual syndrome; case reports & psychosomatic and analysis, Cesk. Psychiat., 53 no.4:272-279 Sept 57.

1. Akademia Medelni Ulm / Praha.
    (PSILOSY, cont.
        premenstrual tension, psychosomat. (Cze)
    PSYCHOSOMATIC MEDICINE, cont.
        rigidity, premenstual. (Cze)
    MENSTRUATION, in normal it.
        premenstrual tension, psychosomat. aspects

HAAS, L.

Anosognosia and body image disorders and their relation to parietal
lesions. Neur. & psychiat.cesk. 13 no.4:269-284 Oct 50. (CLML 20:5)

1. Of the Neurological Department (Head--Prof.J.Sebek,M.D.) of the
State District Hospital in Kralove Vinohrady.

HAAS, L.

A study trip to Great Britain. Cesk. psychiat. 59 no.3:194-199
Je '63.

1. Psychiatricke oddeleni OUNZ v Praze 5.
        (PSYCHIATRY)   (HOSPITALS, PSYCHIATRIC)

BUDESIN KY, B.; HAAS, K.

> Spectrophotometric examination of the reactions of some
> metallic chromium derivatives of cresol red with metal
> ions. Coll Cz Chem 29 no.4:1006-1016 Ap '64.

> 1. Institute of Nuclear Research, Czechoslovak Academy
> of Sciences, Rez near Prague.

BUDESINSKY, B.; HAAS, K.

Spectrophotomitric study of the reaction of metallochrome-
violet A with hydrogen and various metal ions. Acta chimica
Hung 39 no.1:7-19 '63.

1. Nuclear Research Institute of the Czechoslovak Academy
of Sciences, Rez u Prahy, Czechoslovakia.

BUDILINSKY, R., HAVEL, R.

Preparation and metallic-chromic properties of new two azo
derivatives of chromotropic acid. Chem Zvesti 18 no.4:
2758-2766 N '64.

1. Institut fur Kernforschung, Tschechoslowakische Akademie
der Wissenschaften, Rez near Prague.

HAAS, Karel, promovany geolog

Recording the underground water table in boreholes by limnographs.
Geolog pruzkum 5 no.1:24-25 Ja '63.

1. Vyzkumny ustav pro hnede uhli, Most.

NYVLT, Ya. [Nyvlt, J.]; MICHEK, F. [Micek, F.]; GAAS, K. [Haas, K.]

Freezing out of calcium nitrate obtained in the decomposition
of apatite by nitric acid. Zhur.prikl.khim. 35 no.7:1424-
1434 Jl '62. (MIRA 15:8)

1. Issledovatel'skiy institut neorganicheskoy khimii, Usti nad
Labem, Chekhoslovakiya.
       (Calcium nitrate)   (Apatite)

POL/39-59-11-4/16

The Quality Problem in the Production of Steel for Cold Screw
and Rivet Upsetting

       not earlier than 24 hours before upsetting. When
       the storage period exceeds 24 hours, the steel must
       be soaked at 500° Centigrade for an hour. There is
       1 graph, 6 photographs, 2 tables and 4 references, 2
       of which are English, 1 Soviet and 1 German.

ASSOCIATION: Instytut metalurgii zelaza (Institute of Iron Metal-
            lurgy), Gliwice

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POL/39-59-11-4/16

The Quality Problem in the Production of Steel for Cold Screw and Rivet Upsetting

is shown in Table 1, and mechanical properties in Table 2. The Si content in well-cast steel must be about 0.05% and should not exceed 0.10%. The permissible content of Mn is 0.30% and that of copper 0.20%. Preliminary deoxidization is done only by means of ferromanganese. Final deoxidization is performed by means of Ca-Si in quantities of 1.2 kg per ton and Al in quantities of 1.2 kg per ton of steel. The casting temperature is set at 1490-1520° Centigrade Pyropto without correction. Since killed steel contains more than 0.30% C, it must be soaked at about 680° Centigrade for about 5 hours. The rolled shapes are cold-drawn at screw and rivet plants and used for screw and rivet production. The author points out that, cold-drawing of screw and rivet plants under excessive deformation which sometimes exceeds 25% and drawing rolled steel for reserve are both wrong methods. Excessive deformation causes a higher reject rate, while drawing for reserve means brittleness due to long storage. The steel must be drawn

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POL/39-59-11-4/16

The Quality Problem in the Production of Steel for Cold Screw
and Rivet Upsetting

require the addition of NaF only if the carbon con-
tent exceeds 0.15% or when boiling is weak; 3) The
steel casting temperature must be kept between 1,480
and 1,500° Centigrade Pyropto without correction; 4)
The casting speed must stay within 150-200 millime-
ters per minute. The effect of casting speed is ra-
ther high. Further processing in the rolling mill
does not have much effect on the surface quality of
blooms. However, the rolling temperature of 1150 to
1250° Centigrade is stated to be important in blis-
ter suppression. Because of little experience in the
production of semi-killed steels, the manufacture of
rimmed steels of the 35 grade and 0.17-0.35% Si and
0.50-080% Mn content was started. Discouraging ex-
periences resulted in the introduction of a new steel
with a maximum content of 0.10% Si and 0.40% Mn, kil-
led by means of Al. Comparative tests showed that
A35 steel (killed by Al) was of better quality than
the 35 grade. The chemical composition of the steels

Card 3/5

The Quality Problem in the Production of Steel for Cold Screw
and Rivet Upsetting

perience, the author recommends the use of killed
steel for screw and rivet upsetting. Al must be
used instead of Si in steel killing. Two sorts of
steel are produced: rimmed steel with a C content
between 0.07 and 0.25% and killed steel with a C con-
tent higher than 0.25%. Further, the production of
rolled shapes from rimmed steel is described. The
author emphasizes that the surface quality of the
slabs is of primary importance and blisters must be
kept far from the surface or entirely suppressed.
The methods of acquiring this property are: 1) In-
tensive boiling in the mold: the steel must be highly
oxidized. Aluminum may be added in quantities of
100 grams per ton only when the steel is overoxidized,
which is only possible in steel with a C content lo-
wer than 0.1%. Al is used only in 10X, St2N and St2
steels; 2) Steels with a C content higher than 0.15%
must be added 80 grams of sodium fluoride per ton of
steel to facilitate boiling in the mold. NaF is ad-
ded to 20X and St3 steels; the 15X, St2 and St37 steels

Card 2/5

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18(7)

POL/39-59 11 4/16

AUTHOR: Haas, Jerzy, Doctor Engineer

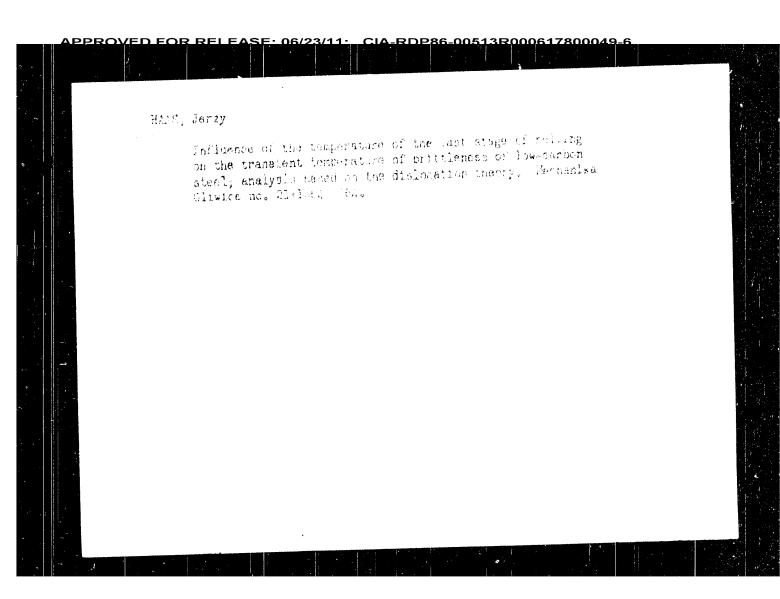TITLE: The Quality Problem in the Production of Steel for Cold Screw and Rivet Upsetting
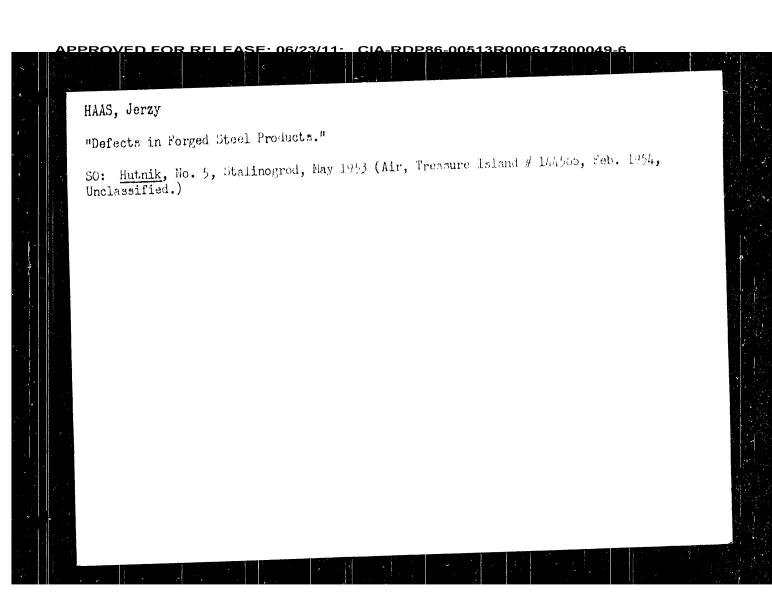
PERIODICAL: Hutnik, 1959, Nr 11, pp 444-449 (POL)

ABSTRACT: The article is concerned with the selection of car-bon steel for cold upsetting, production of rimmed and killed steel and describes a new kind of killed steel for cold upsetting as well as the processing of rolled steel in a screw plant. The author introduces the article with general principles of steel selection for cold screw and rivet upsetting. He mentions the effect of alloy admixtures, especially C, Mn, and Si, on the malleability of the material and points out that rimmed steel must be used for this purpose. The upper limit of C content in rimmed steel with a hi-gher C content meets a number of difficulties. Pro-duction of steel with a Mn content higher than 0.5% is most likely difficult to accomplish. Since the production of semi-killed steel with a C and Mn con-tent higher than the limit requires considerable ex-
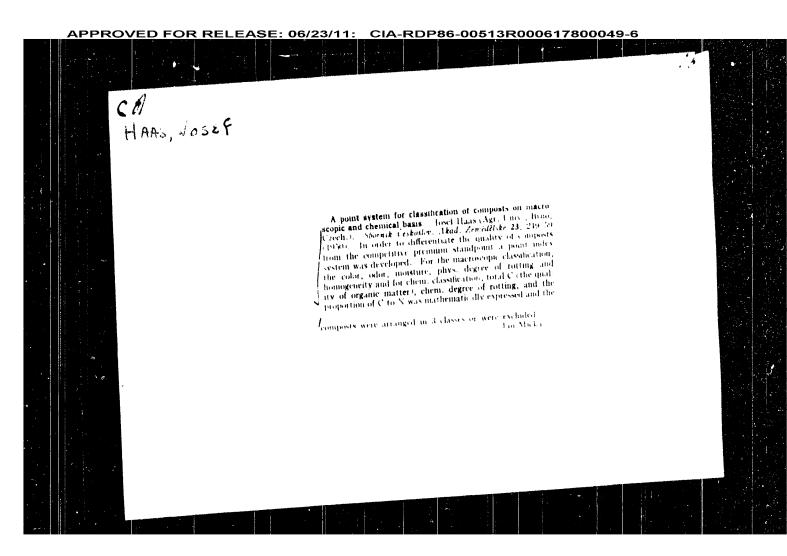
Card 1/5

HAAS, Jerzy

Influence of the temperature of the last stage of rolling
on the transient temperature of brittleness of low-carbon
steel, analysis based on the dislocation theory. Mechanika
Gliwice no. 21=1963 '63.

HAAS, Jerzy

"Defects in Forged Steel Products."

SO: Hutnik, No. 5, Stalinogrod, May 1953 (Air, Treasure Island # 144565, Feb. 1954, Unclassified.)

Polish Technical Abst.   2384

No. 4, 1953

Metallurgy

621.741.4:669.14.621.746.001.5

Haas J. Primary Crystallization of Hadfield Steel.
Krystalizacja pierwotna stali Hadfielda. (Prace
Inst. Metalurgii No. 3), Katowice, 1952, PWT, 36
pp., 33 figs., 19 tabs.

The author reviews opinions and data in the
technical literature concerning the problem of
primary crystallization of metals. Investigations
were made to ascertain the effects on the technique of
melting of the additions of Al, Ti, V, B, Ca-Si, P
and Na_2CO_3 and also of cooling conditions on the
primary crystallization of steel containing 12% of
Mn (Hadfield steel)., According to the author's
opinion, in the process of primary crystallization
the drop in interface temperature, and the increase in
maximum temperature of crystallization are the mean
factors determining—in certain conditions—the
termination of the formation of transcrystalline layer,
as also the commencement of globular crystallization
of the metal. The first of these factors predominates
in small ingots and in thin-walled energetically cooled
castings, the second—in large ingots and in thick-walled
castings very slowly cooled. In intermediate cases,
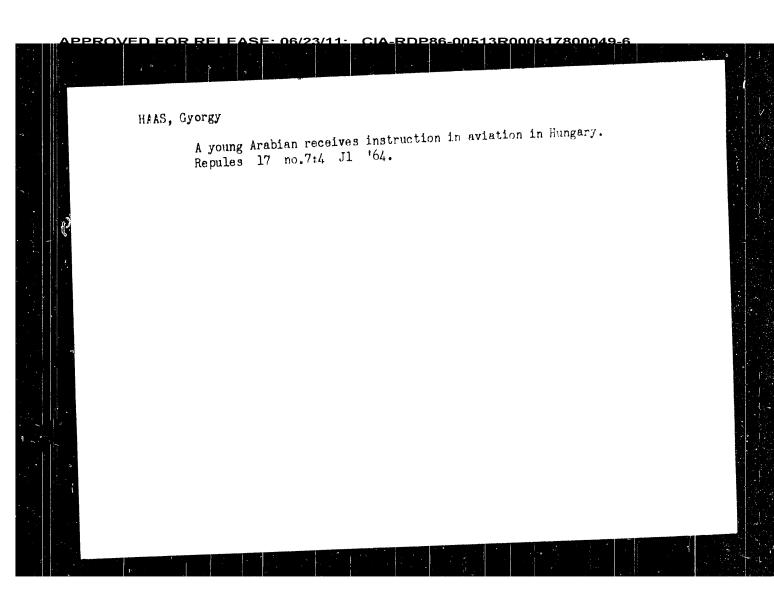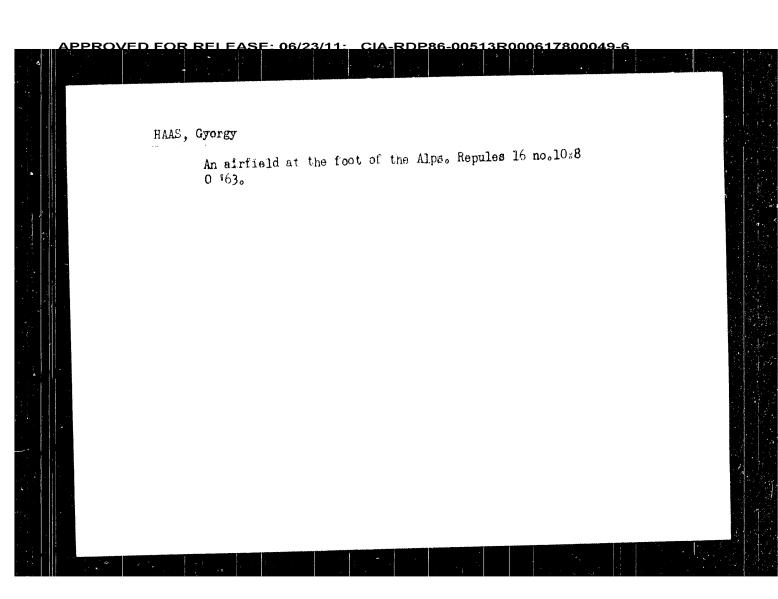the two factors operate simultaneously.

CA

HAAS, Josef

A point system for classification of composts on macro-scopic and chemical basis. Josef Haas (Agr. Univ., Brno, Czech.). Sbornik Ceskoslov. Akad. Zemedelske 23, 219-30(1950). In order to differentiate the quality of composts from the competitive premium standpoint a point index system was developed. For the macroscopic classification, the color, odor, moisture, phys. degree of rotting and homogeneity and for chem. classification, total C (the qual-ity of organic matter), chem. degree of rotting, and the proportion of C to N was mathematically expressed and the composts were arranged in 3 classes or were excluded.
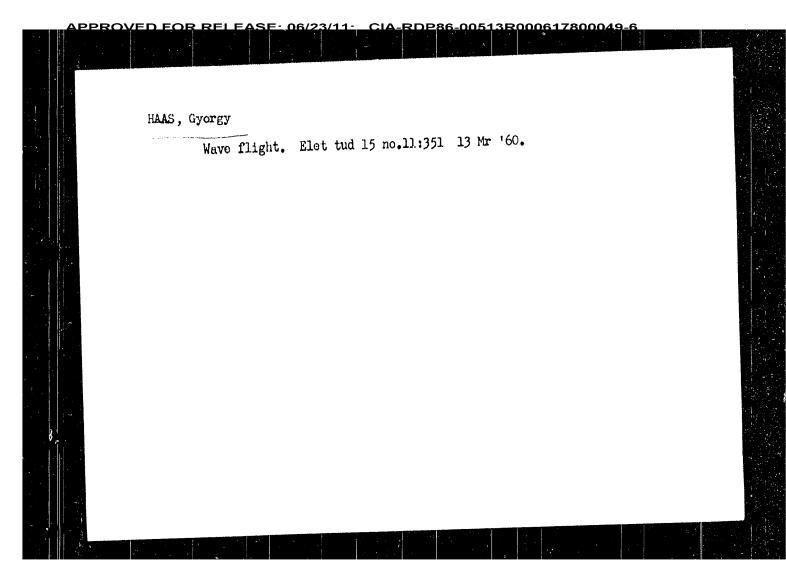
Ini Micka

HAAS, H.

WEINBACH, R. HAAS, H.

Origin and characteristics of natural heterohemagglutinins. Stud.
cercet. inframicrobiol., Bucur. 8 no.3:419-433 1957.
(HEMAGGLUTINATION
heterohemagglutinins in normal sera, origin, identification
& relation to blood groups)
(BLOOD GROUPS
heterohemagglutinins in sera of normal persons of various
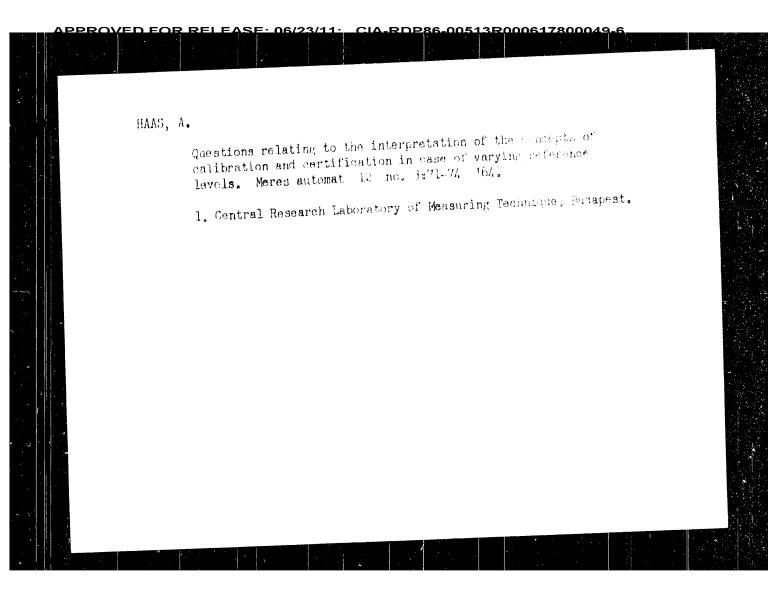blood groups, origin & nature)

HAAS, H.

ESANU, G.; BANC, S.; GAICU, N.; WEINBACH, R.; HAAS, H.; STAVRI, D.

A study on Leuconostoc strains isolated in the Rumanian People's
Republic. Rumanian M. Rev. 1 no.2:25-26 Apr-June 57.
            (FUNGI
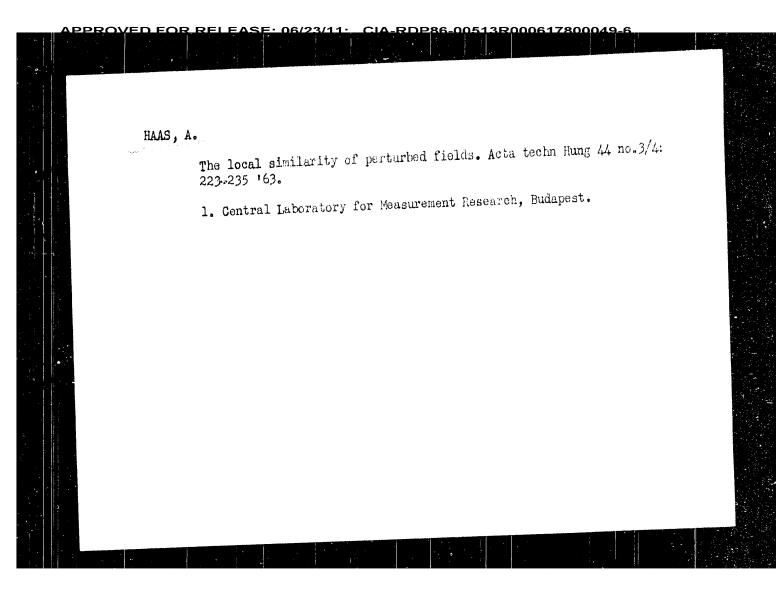   Leuconostoc strains isolated in Rumania)

HAAS, Gyorgy

A young Arabian receives instruction in aviation in Hungary.
Repules 17 no.7:4 Jl '64.

HAAS, Gyorgy

An airfield at the foot of the Alps. Repules 16 no. 10:8
O '63.

HAAS, Gyorgy

Wave flight. Elet tud 15 no.11:351 13 Mr '60.

HAAS, A.

Questions relating to the interpretation of the concepts of
calibration and certification in case of varying reference
levels. Meres automat 12 no. 3:71-74 '64.

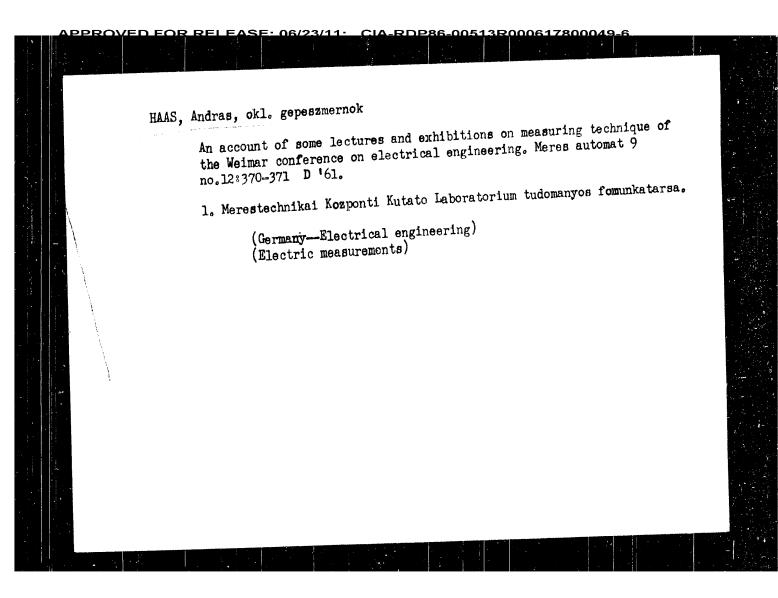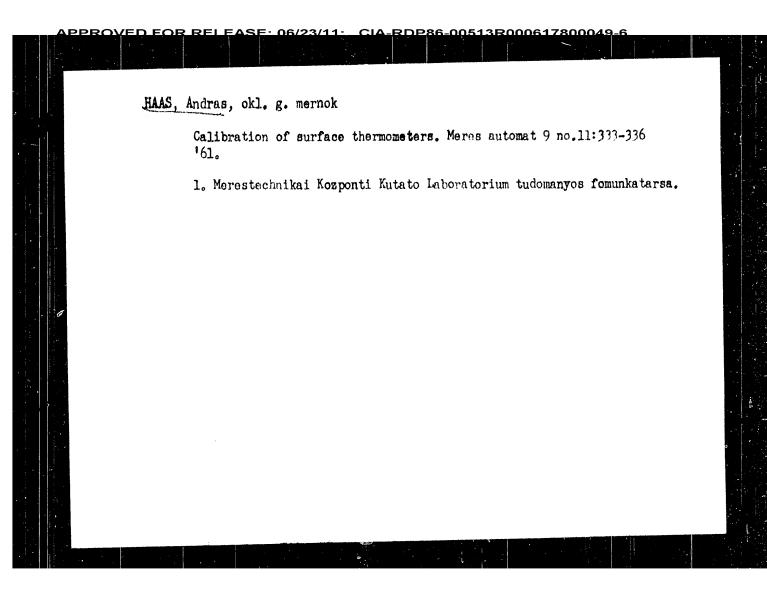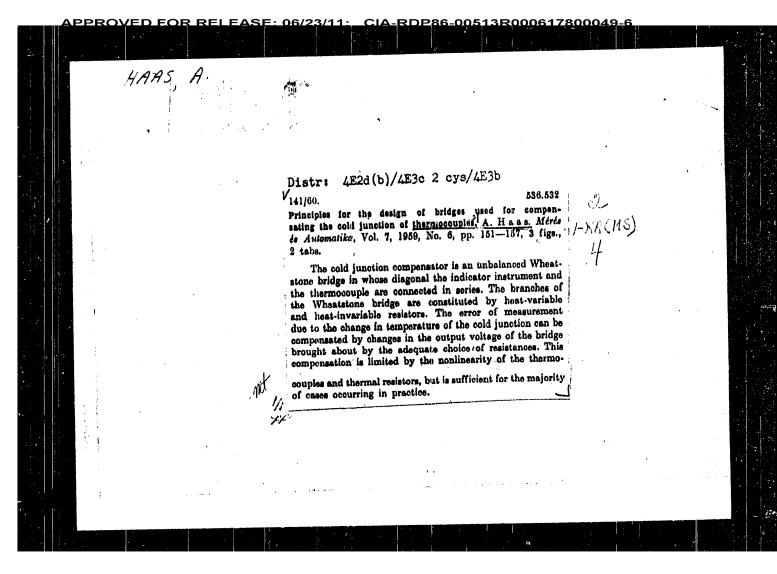1. Central Research Laboratory of Measuring Technique, Budapest.

HAAS, Andras, okleveles gepeszmernok

Theoretical questions of temperature measurement with loose heat coupling. Meres automat 11 no.12:369-371 '63.

1. Merestechnikai Kozponti Kutato Laboratorium tudomanyos osztaly-vezetoje.

ALMASSY, Gyorgy, dr.; BORGHISZA, Gyula; _____, ____: HAAS, _____; _____,
        Endre; KEMENY, Tamas; KOVACS, Ivan; _____, _____; _____, ____, __.;
        PETIK, Ferenc; SZLAVIK, Ferenc; _____, ____, __.: _____, _____, __.

        Lectures delivered at the 3d International Measurement Conference.
        Meres automat 12 no.9:270-292 '64.

        1. Editorial board member, "_____ __ _____" (for Almassy, Borghisza,
        Juhasz, Kemeny, Lukacs and Tamas.).

HAAS, Andor

Thermal signal transmission of sheathed thermometers. Finommechanika
4 no.4:118-120,124 Ap '64.

1. Scientific Division Chief, Central Research Laboratory of
Measuring Technique, Budapest.

HAAS, A.

The local similarity of perturbed fields. Acta techn Hung 44 no.3/4: 223-235 '63.

1. Central Laboratory for Measurement Research, Budapest.

HAAS, Andras, okl. gepeszmernok

An account of some lectures and exhibitions on measuring technique of the Weimar conference on electrical engineering. Meres automat 9 no.12:370-371 D '61.

1. Merestechnikai Kozponti Kutato Laboratorium tudomanyos fomunkatarsa.

(Germany--Electrical engineering)
(Electric measurements)

HAAS, Andras, okl. g. mernok

Calibration of surface thermometers. Meres automat 9 no.11:333-336
'61.

1. Merestechnikai Kozponti Kutato Laboratorium tudomanyos fomunkatarsa.

HAAS, A.

Distr: 4E2d(b)/4E3c 2 cys/4E3b

141/60.   536.532

Principles for the design of bridges used for compen-
sating the cold junction of thermocouples. A. Haas. Mérés
és Automatika, Vol. 7, 1959, No. 6, pp. 151—157, 3 figs.,
2 tabs.

The cold junction compensator is an unbalanced Wheat-
stone bridge in whose diagonal the indicator instrument and
the thermocouple are connected in series. The branches of
the Wheatstone bridge are constituted by heat-variable
and heat-invariable resistors. The error of measurement
due to the change in temperature of the cold junction can be
compensated by changes in the output voltage of the bridge
brought about by the adequate choice of resistances. This
compensation is limited by the nonlinearity of the thermo-
couples and thermal resistors, but is sufficient for the majority
of cases occurring in practice.

HAIR, E.

THE PRODUCT IN TECHNOLOGY A BASIC ...

P 27 ('AGYAG HI a oF CHINA) BUDAPEST, HUNGARY Vol. 9 No 1/2 JUNE 1957

SO: MONTHLY INDEX OF EAST EUROPEAN (EEAI) Vol. 6 No 11 NOVEMBER 1957

HA... ......

Manufacture of ...... from ...... them clot 12 no.21-15
....

HAAR, Istvan

Manufacture of goods from fiberglass. Magy textil 15 no.8:
361-364 Ag '63.

HAAR, Istvan

Present experiences with the design and manufacture of the
Hungarian-made two-way ribbon loom without shuttle. Magy textil
15 no.1:21-25 Ja '63.

HAAR, I.

"Modernized ribbon looms, and further possibilites for modernization."
p. 132

MAGYAR TEXTILTECHNIKA (Texilipari Muszaki es Tudomanyos Egyesulet)
Budapest, Hungary, Vol. 11, No. 3, Mar. 1959.

Monthly List of East European Accessions (EEAI) LC, Vol. 8, No. 6, June 1959
Uncl.

HAAR, I.

HAAR, I. Possibilities of reducing prime cost in the cotton weaving industry. p. 455.

No. 11/12, Nov./Dec. 1955.
MAGYAR TEXTILTECHNIKA.
TECHNOLOGY
Budapest, Hungary

So: East European Accession, Vol. 5, No. 6, May 1956

HAAN, E.

"We visited Szuhakallo." p. 7. "Chaliapin." p. 8. (MAGYAR RADIO, Vol. 9, no. 8, Feb./Mar. 1953. Budapest.)

SO: Monthly List of East European Accessions, Vol. 2, #8, Library of Congress August, 1953, Uncl.

HAAGEN, F.

HAAGEN, F.. Correct drying and correct condensation in the process of enriching
    artificial resins. p. 1152.

Vol. 4, no. 11, Nov. 1955
TEKSTIL
Zagreb, Yugoslavia

So: Eastern European Accession Vol. 5 No. 4 April 1956

HAAG, Dezso

Badly assembled engine bearings. Jarmu mezo gep 4 no.2081-84
Je '57.

HAAG, Dezso, okleveles gepeszmernok

Waste process diesel engine lubricating oils. Jarmu mezo gep
11 no.11:423-430 N '64.

1. Engine Testing Division, Hungarian Mineral Oil and Natural
Gas Experimental Institute.

Structure and mode of action of ...

S/081/62/000/006/077/117
B167/B101

by the flow of DL can appreciably increase the viscosity of SL, if they are
sufficiently great, and even "solidify" it. The minimum thickness of LF is
determined by the thickness of the two adsorbed layers. When these are in
contact, lubrication is characterized by the "dry friction" coefficient of
the solidified lubricant until the load causes chemical or physical
breakdown. The modern picture of the structure and mode of action of LF
enables familiar physical laws to be used for describing the interrelation
between the rheological properties of the lubricant, the load, the geometry
of LF, the material of the bearing couple, and friction and wear phenomena.
These statements apply equally to Newtonian and to non-Newtonian liquids.
Rheological factors are therefore of the utmost importance. Possible ways
of improving lubricants are suggested. [Abstracter's note: Complete
translation.]

Card 2/2

S/081/62/000/006/077/117
B167/B101

AUTHOR: Haag Dezsö

TITLE: Structure and mode of action of lubricating films

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 6, 1962, 537-538, abstract
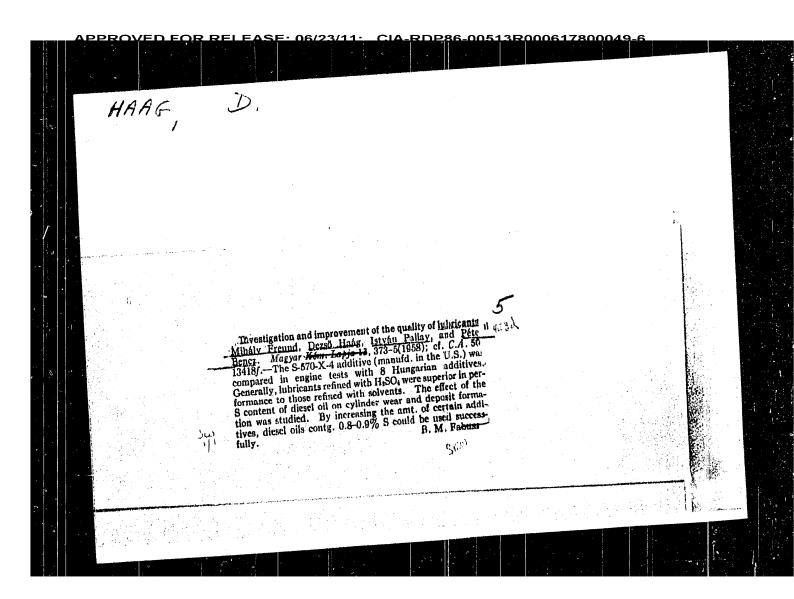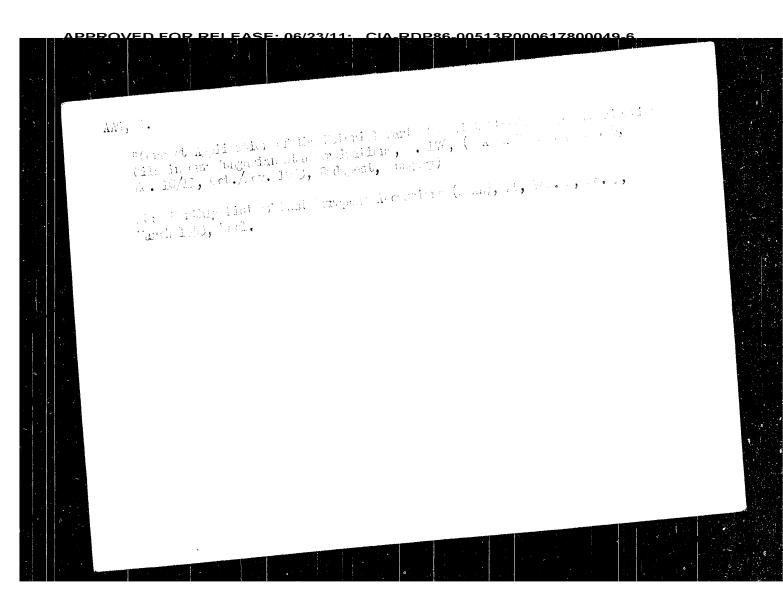   6M232 (Magyar ásványolajés földgáz kisérl. int. közl., no. 2,
            1961, 166-179)

TEXT: A critical review. The development of the theory of lubrication is
presented, and earlier views on the structure of the lubricating film (LF),
(according to which the metallic surfaces are in contact, and dry friction
and material wear must be considered), are contrasted with present-day
theories. These view the LF as consisting of three layers: two of the
layers are subjected to a static load and adsorbed on the metal surfaces,
the third is a dynamic layer (DL), freely flowing between the surfaces.
The composition and physico-chemical properties of the first two layers
(but not of the third) can be affected by adsorption processes. The
conversion of energy occurring in LF increases the viscosity of the static
layer (SL), but it can only raise the temperature of DL. Pressures induced
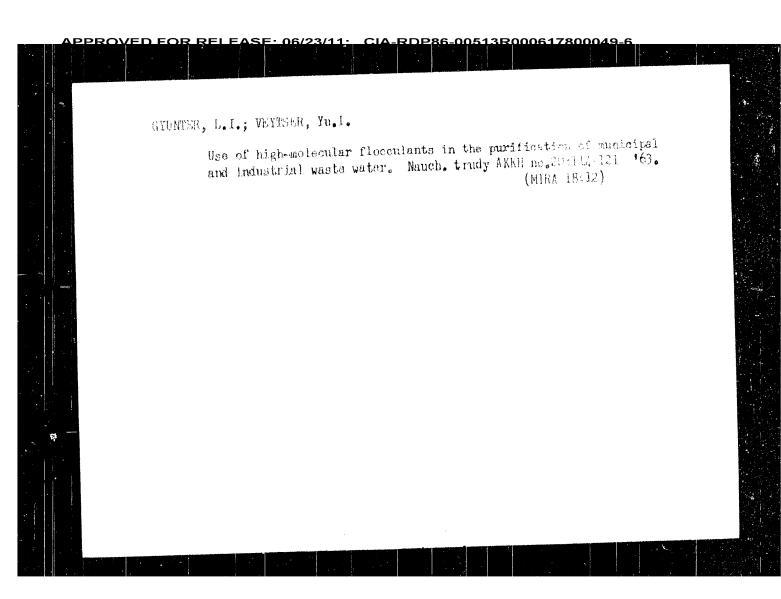
Card 1/2

HAAG, D.; MELLER, V.

Detection of car engine breakdowns without disassembling the machinery. p.307.

KOZLEKEDESTUDOMANYI SZEMLE. Budapest, Hungary. Vol. 9, no. 7, July 1959.

Monthly List of East European Accessions (EEAI), LC. Vol. 8, No. 9, September 1959
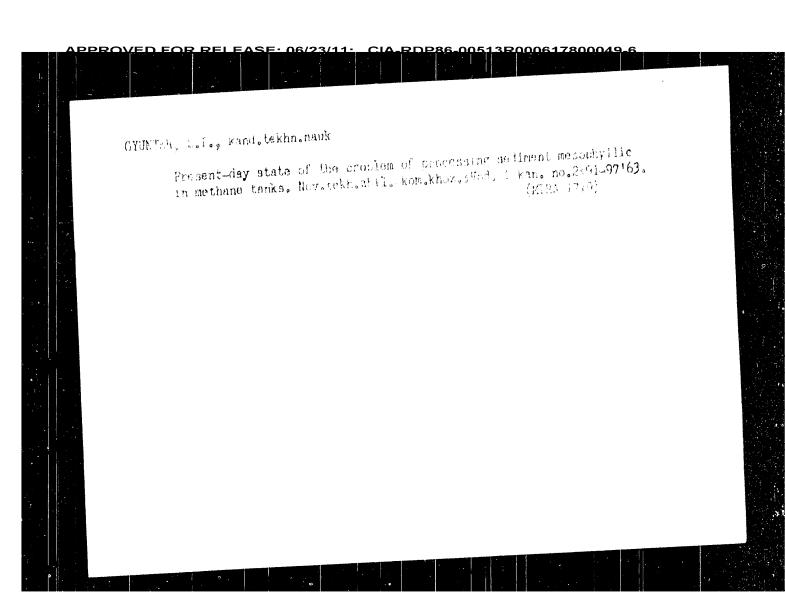
Uncl.

HAAG, D.

5

Investigation and improvement of the quality of lubricants. Mihály Freund, Dezső Haag, István Pallay, and Péter Bencz. *Magyar Kém. Lapja* 13, 373-5(1958); cf. *C.A.* 56 13418f.—The S-570-X-4 additive (manufd. in the U.S.) was compared in engine tests with 8 Hungarian additives. Generally, lubricants refined with H_2SO_4 were superior in performance to those refined with solvents. The effect of the S content of diesel oil on cylinder wear and deposit formation was studied. By increasing the amt. of certain additives, diesel oils contg. 0.8-0.9% S could be used successfully. B. M. Fabuss

MI.. .

EFFECTIVELY CONTROLLED WATER BALANCE.

p 81 (TAKOVER TECHNICAL ... G FEL) BUDAPEST, HUNGARY VOL 4 N 2 JUEN 1957

86: MONTHLY IDEA OF EAST EUROPEAN AGRICULTURE (AGRI) VOL 4 N 11 N ... ER 1957
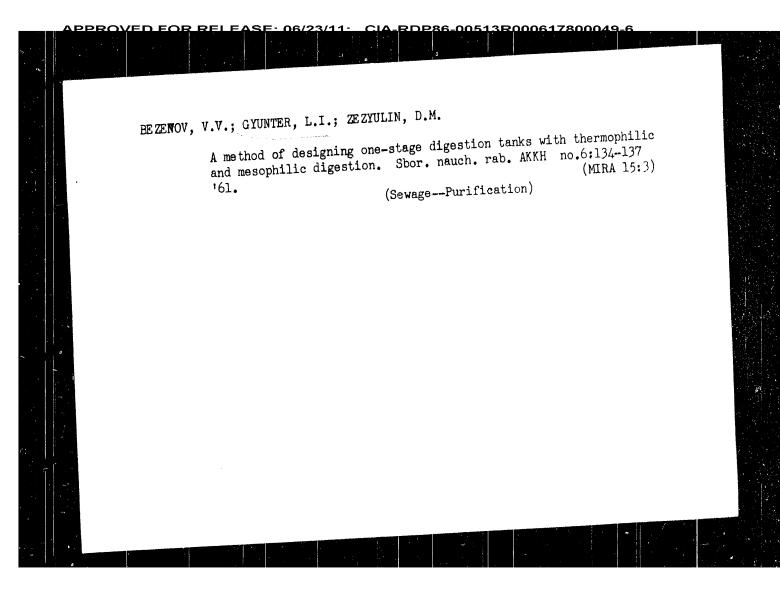
AM, C.

[illegible faded text]

GOREV, V.P.; GYUNTER, M.B.; TARASOV, I.A.

Electrophysiological changes during mud applications. Izv.AN Kazakh.
SSR Ser.khir. no.1:93-102 '47.

(MIRA 9:8)

1. Institut klinicheskoy i eksperimental'noy khirurgii Akademii nauk
KazSSR.

(BATHS, MOOR AND MUD)
(CONDITIONED RESPONSE)

(ELECTROPHYSIOLOGY)

GYUNTER, L.I.; VEYTSER, Yu.I.

Use of high-molecular flocculants in the purification of municipal
and industrial waste water. Nauch. trudy AKKH no.20:14-121 '63.
(MIRA 18:12)

GYUNTER, L.I., kand.tekhn.nauk

Present-day state of the croblem of processing sediment mesophyllic in methane tanks. Nov.tekh.al'i. kom.khoz.:Mod. : kan. no.2:91-97'63.

(MIRA 17:4)

GYUNTER, L.I.

The role of carbohydrates, fats, and albumins in gas formation
during the digestion of sewage sediments in digestion tanks.
Sbor. nauch. rab. AKKH no.6:158-170 '61.   (MIRA 15:3)
                              (Sewage--Purification)

BEZENOV, V.V.; GYUNTER, L.I.; ZEZYULIN, D.M.

A method of designing one-stage digestion tanks with thermophilic and mesophilic digestion. Sbor. nauch. rab. AKKH no.6:134-137 '61.

(MIRA 15:3)

(Sewage--Purification)

BEZENOV, V.V.; GYUNTER, L.I.

Prospects for the use of graduated digestion of sewage sediments.
Sbor. nauch. rab. AKKH no.6:116-133 '61.

(MIRA 15:3)

(Sewage—Purification)

GYUNTER, H. (Veterinary Doctor, Bereznikov Inter-District Veterinary
Bacteriological Laboratory, Perm Oblast'). (Abstracted by NOSKOV, A. I.)

"Experimental eradication of herpes tonsurans in cattle".....
Veterinariya, vol. 39, no. 2, March 1962 pp. 29

YURKOV, Petr Vasil'yevich; PROFERANSOV, D.P., red.; GYUNTER, A.R.,
red.; KASIMOV, D.Ya., tekhn. red.

[What the builder should know about accounting on a construction
project] Chto nuzhno znat' stroiteliu ob uchete na stroike. Mo-
skva, Gos. izd-vo lit-ry po stroit., arkhit. i stroit. materialam
1961.   34 p.   (MIRA 15:3)
        (Construction industry—Accounting)

GYUNTER, A., mekhanik

Make tire mileage norms coincide with operating conditions. Avt.
transp. 33 no.9:32 S'55.

(MIRA 8:12)

(Automobiles--Tires)

GYUNTER A.,

GYUNTER, A.

Some operating requirements of automobile construction. Avt.transp.
32 no.11:28 N '54.
(Automobiles—Design and construction)

(MLRA 8:3)

L 04826-67

ACC NR: AP6026971

apparently possible in defect sites of the lattice, where ionic bonds are weak. Orig. art. has: 5 figures.

SUB CODE: 20/ SUBM DATE: 13Apr65/ ORIG REF: 011/ OTH REF: 007

Card 2/2

L 04826-67   EWT(1)/EWT(m)/EWP(t)/ETI   IJP(c)   JD
                                          SOURCE CODE: UR/0051/66/021/002/0188/0191
ACC NR: AP6026971

AUTHOR: Gyunsburg, K. Ye.; Golubentseva, L. I.; Kats, M. L.

ORG: none

TITLE: Absorption and luminescence centers in NaCl-Cu and KCl-Cu phosphor crystals

SOURCE: Optika i spektroskopiya, v. 21, no. 2, 1966, 188-191

TOPIC TAGS: luminescence center, crystal phosphor, alkali halide, CRYSTAL ABSORPTION

ABSTRACT: An examination of data previously reported in the literature shows that the 272-274 nm absorption and 485-500 nm luminescence bands of copper-activated alkali-halide crystals are due to the so-called type II centers. In order to elucidate the structure of these centers, a study was made on NaCl-Cu and KCl-Cu phosphors to determine the relationship between these centers and the possibility of formation of complexes in the phosphors. To this end, absorption spectra of mixed aqueous solutions of CuCl and the alkali metal chlorides (KCl and NaCl) were taken. Comparison of these spectra with the absorption and excitation spectra of NaCl-Cu and KCl-Cu phosphors showed a complete similarity of the spectra of the solutions with the absorption bands of type II centers. If it is assumed that copper complexes with predominantly cova- lent bonds are formed in the solutions studied, one can deduce from this similarity that at least one kind of type II centers in NaCl-Cu and KCl-Cu crystals consists of complexes with predominantly covalent bonding. The formation of such complexes is

UDC: 535.373.1

Card 1/2

L 43912-65

ACCESSION NR: AP6009615

storage following quenching. Other effects were also observed. In particular, the addition of the divalent ions sometimes resulted in the appearance of a new luminescence band in the vicinity of 500 mμ. This new band appeared only in those cases in which a stable compound of the type AMCl₂ was possible, where AR is an alkali metal and M is a divalent metal, and it is suggested that the luminescence centers responsible for this band may be copper ions at lattice sites with weakened bonds in the neighborhood of a compound of this type. Orig. art. has: 3 figures.

ASSOCIATION: None

SUBMITTED: 00   ENCL: 00   SUB CODE: OP, SS

NR REF SOV: 008   OTHER: 001

Card 2/2/5

L 49 2-65   EWT(c)/EWT(m)-2/EPF(s)-2/EWA(c)/EWT(l)/EWT(m)/EWP(b)/T/EWP(t)   Pi-4/
Pr-4/Pu-7/Po-4   IJP(c)   JD/JG

ACCESSION NR: AP5009515   S/0048/65/029/003/0412/0414

AUTHOR: Kats, M.L.; Gvimburg, A.Ya.; Golubentseva, L.I.

TITLE: Effect of divalent calcium and strontium ions on the special character-
istics of alkali halide phosphors /Report, 12th Conference on Luminescence held
in L'vov, 30 Jan-5 Feb 1964/

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v. 29, no. 3, 1965, 412-414

TOPIC TAGS: luminescence, luminescent crystal, sodium chloride, copper, lead,
calcium, strontium

ABSTRACT: The authors have investigated the influence on the luminescence of
NaCl:Cu and NaCl:Pb phosphors of introduction of Ca or Sr ions. These phosphors
are known to contain two types of luminescence centers, of which one type (here
called "type II") involves a lattice defect as well as an activator ion. The
addition of divalent ions was undertaken in an effort to increase the concentration
of type II centers. This attempt was successful, and it was found that type II
centers become the principal luminescence centers in NaCl:Cu,Br after prolonged

Card 1/3

89241

S/048/61/025/001/007/031
B029/B067

Excitation of luminescence...

KI-Sn crystal phosphors under the action of light from the range of self-absorption. Such an irradiation reduces absorption in the range of the activator bands. In crystal phosphors with divalent activators, inter-action processes take place between excitons and activator centers, which excite the luminescing centers and give rise to singly-ionized or atomic centers. This is the reproduction of a lecture read at the Ninth Conference on Luminescence (crystal phosphors), Kiyev, June 20-25, 1960. There are 3 figures and 9 references: 6 Soviet-bloc and 3 non-Soviet-bloc.

Card 3/5

89241

S/048/61/025/001/007/031
B029/B067

Excitation of luminescence...

in its intensity with decreasing temperature (Fig. 1). The rest of the
bands are due to activating impurities. Similar bands within the range of
exciton absorption were observed in the excitation spectra of KI-Pb and
NaI-Sn crystals (Fig. 2). The activity of the bands about 219 mμ for KI
and about 229 mμ for NaI increases with the content in activating impurities
of the phosphors. In the absorption spectra of tin-activated alkali-halide
crystals, the absorption bands of the activator decrease after exposure to
X-rays and the intensity of luminescence of these crystal phosphors is
reduced. This is due to the formation of non-luminescing atomic centers
in tin. The activator bands in the excitation spectra of the potassium of
the KI-Sn crystal, additively colored in the vapors, vanished on transi-
tion of the ion centers of tin to atomic centers. Simultaneously, the
exciton bands of excitation vanished completely. The color of luminescence
is the same in the case of both excitation in the activator bands and
exciton bands. Changes in the absorption spectra of the crystal phosphor
allow to draw conclusions as to the interaction of excitons with activators
and thermal microdefects in the crystal lattice. The authors determined
the absorption of the specimen before and after irradiation in the exciton
band in order to ascertain the change in the absorption spectra of the

Card 2/5

89241

S/048/61/025/001/007/031
B029/B067

9,6150 (also 1137, 1395)

AUTHORS: Kats, M. L., Gyünsburg, K. Ye., and Goulubentseva, L. I.

TITLE: Excitation of luminescence in activated alkali iodides at low temperature by means of excitons

PERIODICAL: Izvestiya Akademii nauk SSSR . Seriya Fizicheskaya, v. 25, no. 1, 1961, 43-44

TEXT: The authors investigated the spectra of the excitation of luminescence by excitons since new experimental data are required for establishing a theory on energy migration in a crystal phosphor. Alkali-halide iodides were activated with divalent tin and lead ions. The investigation was made with phosphors with a KI and NaI base, whose exciton absorption bands lie in the range about 219 and 229 mμ, respectively. The excitation spectra were taken at +20°C and -150°C by means of a special cryostat mounted in an CФ-4 (SF-4) spectrophotometer which served as a monochromator. Studies of the excitation spectra of KI-Sn crystals showed an excitation band in the range of exciton absorption with a maximum at 219 mμ, and also a strong rise

Card 1/5

L 28322-66

ACC NR: AP6013086

obtains in the case of introduction of a metal that forms complexes with predominantly covalent bonds. Accordingly, in the present work there were compared the absorption spectra of NaCl:Cu and KCl:Cu crystal phosphors with their water solutions. Here there was not observed agreement between the positions of the absorption bands associated with type I centers. The absorption peaks of type I centers are situated at 254-255 mμ in the case of NaCl:Cu phosphors and at 260-262 mμ for KCl:Cu phosphors, whereas the peak of the absorption band of solutions is observed at 272-274 mμ in both cases. However, upon chilling to about -150°C there appears in the spectrum of un-quenched NaCl:Cu crystal an additional band peaking at 272-274 mμ, i.e., coinciding with the absorption band of the solution. Analogous behavior is exhibited by the respective luminescence bands. It is inferred from the experimental data that type II centers, i.e., copper ions lodged in the vicinity of microdefects in the crystal lattice, are responsible for the 272 mμ absorption bands and the luminescence at 485-500 mμ. Water solutions of CuCl with an excess halide ion concentration do not luminesce at all at room temperature, but upon chilling to -140°C emit intense blue-green luminescence. It is concluded from comparison of the spectral characteristics of the respective solutions with the absorption and luminescence spectra of type II centers in NaCl:Cu and KCl:Cu phosphors that at least centers of one kind in these phosphors consist of complexes with predominantly covalent bonds. These complexes apparently form in the vicinity of defects in the crystal lattice. Orig. art. has: 3 figures.

SUB CODE: 20/   SUBM DATE: 00/   ORIG REF: 011/   OTH REF: 003

Card 2/2

L 23322-66   EWP(j)/EWT(m)/EWP(t)/ETI   IJP(c)   RM/JD

ACC NR: AP6013086

SOURCE CODE: UR/0048/66/030/004/0701/0703

AUTHOR: Kats, M. L.; Gyunsburg, K. Ye.; Golubentseva, L. I.

ORG: none

TITLE: Spectral characteristics of NaCl:Cu and KCl:Cu crystal phosphors and their water solutions /Report, Fourteenth Conference on Luminescence held in Riga 16-23 September 1965/

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v. 30, no. 4, 1966, 701-703

TOPIC TAGS: luminescence center, crystal phosphor, alkali halide, sodium chloride, potassium chloride, absorption spectrum

ABSTRACT: It is known that profound similarity is observed in comparing the spectral characteristics of alkali halide crystals activated by heavy metal ions with their water solutions. For example in the case of Tl^+ and Pb^{2+} the position of the absorption peaks in the wavelength scale virtually does not change in going from KCl:Tl (KCl:Pb) to the solution. This is explained by the fact that the complexes or quasicomplexes that form in these solutions are linked primarily by ionic bonds; in this case the electron shells of the interacting components essentially retain their individual characteristics. It was deemed of interest to determine whether a like analogy between the spectral characteristics of the crystal and the water solution

Card 1/2

I. 28321-66

ACC NR: AP6013085

the phosphor is quenched. The rate of quenching is also significant. Storage of the quenched phosphors at room temperature leads to decrease in the intensity of these bands and low-temperature anneal eliminates them completely. The spectral characteristics of the investigated NaCl:Pb phosphors are presented in a series of figures illustrating the effect of quenching and of the activator concentration. It was found that if an NaCl:Pb phosphor quenched from 350-400°C is x irradiated and then illuminated for several minutes by appropriate ultraviolet there also appear in its excitation spectrum bands at 232 and 328 mμ. On the basis of the experimental data it is concluded that in quenched crystal phosphors there may exist two types of activator trapping centers: divalent lead ions joined to a cationic vacancy and isolated Pb^{2+} ions. The 232 and 328 mμ excitation bands are associated with $^1S_0 \rightarrow ^1P_1$ and $^1S_0 \rightarrow ^3P_1$ transitions in the isolated divalent lead ions. Orig art. has: 4 figures.

SUB CODE: 20/   SUBM DATE: 00/   ORIG REF: 005/   OTH REF: 000

Card 2/2 CC

L 28321-66   EWT(1)/EWT(m)/EWP(t)/ETI   IJP(c)   JD

ACC NR: AP6013085

SOURCE CODE: UR/0048/66/030/004/0698/0700

AUTHOR: Kats, M.L.; Golubentseva, L.I.; Gyunsburg, K.Ye.

ORG: none

TITLE: Activator trapping centers in alkali halide crystals doped with lead /Report,
Fourteenth Conference on Luminescence held in Riga 16-23 September 1965/

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v. 30, no. 4, 1966, 698-700

TOPIC TAGS: crystal phosphor, alkali halide, sodium chloride, luminescence, absorp-
tion , x radiation, absorption spectrum, excitation spectrum

ABSTRACT: In earlier studies by the authors' group it was shown that x irradiation of
lead-activated alkali halide crystals leads to reduction of the usual activator absorp-
tion and to the appearance of atomic absorption bands that peak at 254 mμ in NaCl:Pb
and KCl:Pb and at 276 mμ in KBr:Pb. It was established that the centers responsible
for these new absorption bands are electronic. In the present work there were in-
vestigated the spectra of NaCl:Pb phosphor after quenching from 500°C and higher temp-
eratures. This treatment led to the appearance of two new excitation bands peaking
at 232 and 328 mμ, while only a band at 328 mμ is evinced in the absorption spectrum.
The peak of the luminescence band under excitation in this region is situated at 520
mμ. The intensity of the new excitation bands increases with temperature from which

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ACCESSION NR: AT4043149

representation of the attenuation function $V(x, y, q)$ as well as the convergence of the series expansion which was used in computation. Two sets of curves of W for transmitter elevations from 0-60 km are given for frequencies of 10-kc and 100 kc and C_m 10 and σ 10^{-3} (ohm·m)$^{-1}$. Finally, plots of electric field components as functions of time for sine and cosine signals modulated by a step function are given. Tables 1-4 give the values of v, arg V, Re V and Im V for ranges from 10-10,000 km and frequencies from 2 kc - 10 mc for the following combinations of the dielectric constant C_m and conductivity σ: C_m = 80 and σ = 1 (ohm·m)$^{-1}$ C_m = 20 and σ = 10^{-2}, C_m = 10 and σ = 10^{-3}, C_m = 5. σ = 10^{-4}. Tables 5-8 give the values of the parameter t_s as Re t_s, Im t_s, $|t_s|$ and arg t_s for values of s from 1-10 and for frequencies from 2 kc-10 mc for the same combinations of C_m and σ. Finally, table 9 gives the value of the field for modulated signal for time t from 10^{-3} - 35 μsec and for C_m 20, σ 10^{-2} and C_m 10 and σ 10^{-3} for a plane earth and for an earth of 2 layers, one of which is 50 meters thick. The range parameter extends from 10 to 800 km. Orig. art. has: 96 equations, 92 figures and 9 tables.

ASSOCIATION: Leningradskiy universitet (Leningrad University)

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ACCESSION NR: AT4043149

attenuation function $V(x, y, q)$ for a spherical earth introduced by V. A. Fok (AN SSSR, 1946) is used. It is argued that the availability of tables of the attenuation function for a large number of frequencies enables one to compute the attenuation for an arbitrary signal modulation. After the singularities of the field at the imaginary axis of the complex frequency plane have been separated, a numerical integration method is proposed for evaluation of "transient" spectral components. Three specific examples are worked out in detail: unit step dipole current and sine and cosine dipole current modulated by a unit step function. The first set of curves gives the amplitude and phase as a function of range of the plane earth attenuation function W and spherical earth attenuation function V for ranges from 0-600 km, frequencies from 2 kc-10mc, earth dielectric constants of 5, 10, 20 and 80 with corresponding conductivities of 10^{-4}, 10^{-3}, 10^{-2} and 1 $(\text{ohm} \cdot \text{m})^{-1}$. From these curves, a set of curves is generated which gives a plot of range as a function of frequency for constant percentage difference in amplitude and phase of W and V. This set of curves defines the conditions under which a spherical earth model must be used to achieve a prescribed accuracy. For the same set of surface conditions and frequencies the far field values of V (amplitude and phase) are then plotted for ranges up to 10,000 km. The next group of curves illustrates the frequency variation of the parameters t_1, t_8, t_2 and q of Fok's

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TITLE: Propagation of electromagnetic impulses and of their harmonic components above the surface of the earth

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ABSTRACT: The article presents the results of computations of surface wave propagation path properties in the form of graphs and tables with emphasis on the spectral characteristics of the path. The variation in the conductivity and dielectric constant of the earth with frequency is neglected. The multipath character of ionospheric reflections is also neglected by assuming proper gating function at the receiver. In the theoretical section, formulas for the field of a vertical electric dipole, radiating CW energy above a homogeneous or multi-layer flat or spherical earth, are introduced, using the surface impedance approach. Refraction is taken into account by introducing the equivalent radius of the earth. The path

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